

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

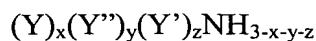
1. (Original) A process for preparing a polyamine derivative, comprising:
 - (a) reacting at least one polyamine wherein one or more polyamines, each with one or more NH_2 functions and one or more second amine functions, said second amine functions having a lower lactone reactivity than said NH_2 functions, is reacted in a first step with at least one member selected from the group consisting of one or more lactones, hydroxyacids, cyclic carbonates, ~~or~~ and mixtures thereof, to form a polyamine derived compound,

wherein:

each of the polyamines comprises at least one NH_2 functional group and at least one second amine functional group, the second amine functional group having a lower lactone reactivity than the NH_2 functional group, and

the polyamine-derived compound having at least one of an amide and an urethane group; and

with amide and/or urethane groups, which polyamine derived compound is reacted in a second step
 - (b) reacting the polyamine-derived compound with an amine modifier and at least one or more at least bifunctional amine-specific reagents reagent to form an intermediate, the amine-specific reagent having at least two amine-specific functional groups, and ~~optionally comprising ester and/or carbonate groups, wherein in the second step optionally an additional an~~ amine modifier of given by formula III):



III)

wherein:

_____ x is an integer of 0, 1 or 2,

_____ y is an integer of 0, 1 or 2,

_____ z is an integer of 0 or 1, ~~wherein~~

_____ x+y is 1 or 2,

_____ x+y+z is 1 or 2,

_____ Y represents an ~~(anchoring)~~ anchoring moiety with affinity for a pigment surface or substrate,

_____ Y'' represents a ~~(stabilising)~~ stabilising moiety with affinity for ~~the a~~ matrix, and

_____ Y' represents a further group that is neither an anchoring moiety nor a stabilising moiety, ~~is co-reacted moiety;~~

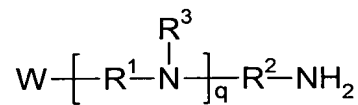
~~and in the intermediate at least two polyamine residues, or if a modifier is co-reacted, wherein the intermediate comprises~~ at least one polyamine residue and at least one ~~optional~~ amine modifier ~~residue, residue are~~ linked by the ~~bifunctional~~ amine-specific reagent.

2. (Currently Amended) A ~~The~~ process according to claim 1, wherein ~~in the second step an intermediate comprising~~ comprises at least two polyamine residues ~~is formed.~~

3. (Currently Amended) A ~~The~~ process according to claim 1, wherein ~~the a~~ number of lactone, hydroxy acid, and/or cyclic carbonate molecules is from 0.1 to 10 times the number of -NH₂ functional groups of the polyamine .

4. (Currently Amended) A ~~The~~ process according to claim 1, wherein the ~~bifunctional~~ amine-specific reagent is ~~used~~ present in an amount such that ~~the a~~ number of amine-reactive -groups ~~corresponds to~~ is from 0.1 to 10 times ~~the a~~ sum of ~~the a~~ number of second amine ~~functions~~ functional groups of the polyamine-derived compound and ~~the a~~ number of amine ~~functions~~ functional groups of the ~~optional~~ amine modifier.

5. (Currently Amended) A ~~The~~ process according to claim 1, wherein ~~a the~~ polyamine is used ~~of given by~~ formula I)



I),

~~wherein where:~~

~~q is an integer from 1 to 10, wherein~~

~~R¹ and R², independently, are each independently selected from an alkylene groups-group with from 1 to 10 carbon atoms, wherein~~

~~each of R³, is independently, is selected from the group consisting of hydrogen, hydroxyalkyls, alkylamines, polyalkylamines, and polyalkylpolyamines, and wherein~~

~~W is a hydroxy or an amine.~~

6. (Currently Amended) A process according to claim 1, ~~which comprises a further step wherein one or more of the~~ wherein:

at least one of the polyamine-derived compound and the intermediate comprises at least one -OH group; and

the process further comprises reacting the at least one -OH groups-group of the polyamine-derived compound or the intermediate which are present after the first step are reacted to attach a matrix-compatible moiety with having a molecular weight of more than 250 to said the polyamine-derived compound or the intermediate, with said further step being conducted either between the first and second steps or, preferably, after the second step.

7. (Currently Amended) A ~~The~~ process according to ~~claim 5 claim 6,~~ wherein:
reacting the at least one -OH groups-group comprises reacting the at least one -OH group with are reacted with one or more at least one compounds compound selected

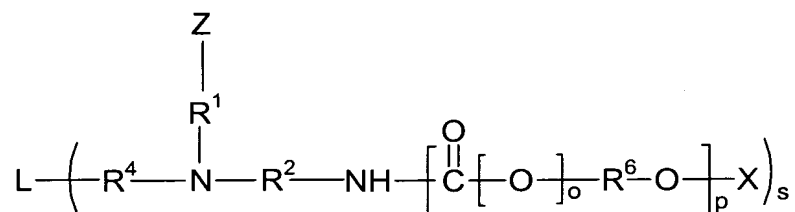
from the group consisting of epoxides, lactones, cyclic carbonates, and hydroxy acids, and
~~other suitable conventional reactants to form polyesters, to form a matrix-compatible moiety;~~
and

the matrix-compatible moiety comprises a linear or branched, substituted or
~~unsubstituted, preferably unsubstituted, C₄-C₃₀ alkyl, a polyester, a polyether, a polyetherester~~
or a polyesterether groups group.

8. (Canceled)

9. (Currently Amended) ~~Polyamine~~ A polyamine derivative of given by formula

II-:



II)

wherein:

each R⁴NR¹ZR²NH moiety is a residue of a polyamine;

each C(O)[O]R⁶O moiety is a residue of a lactone, hydroxyacid and/or cyclic carbonate;

L is a residue of an at least bifunctional amine-specific reagent;

R¹ and R² are as defined above for formula I) R¹ and R² are each
independently an alkylene group with from 1 to 10 carbon atoms;

each index o will is independently be 0 or 1;

index p represents the average number of moiety C(O)[O]R⁶O per
R⁴NR¹ZR²NH moiety and has a value ranging from 0.1 to 30;

_____ each X is hydrogen or, wholly or partly, a substituted or unsubstituted, linear or branched, hydrocarbon group, a polyester, a polyether, a polyetherester or a polyesterether group;

_____ index s represents an integer of 1 to 10, wherein if s is 1, the amine-specific reagent L is further reacted with ~~a compound of formula III as defined above~~ an amine modifier being given by formula III



wherein:

x is 0, 1 or 2,

y is 0, 1 or 2,

z is 0 or 1,

x+y is 1 or 2,

x+y+z is 1 or 2,

Y is an anchoring moiety with affinity for a pigment surface or substrate,

Y'' is a stabilising moiety with affinity for a matrix, and

Y' is a further group that is neither an anchoring moiety nor a stabilising moiety;

_____ R³ is independently selected from the group consisting of hydrogen, hydroxyalkyls, alkylamines, polyalkylamines and polyalkylpolyamine;

_____ R⁴ represents a group R³ minus a proton;

~~R³ is as defined above for formula I), Z presents a group W' [R¹-NR⁵]_{q+1}, Z- represents a group W'-[R¹-NR⁵]_{q-1}, wherein W' is W as defined for formula I above~~ a hydroxy or an amine or the reaction product of group W the hydroxy or the amine with at least one lactone, hydroxyacid, and/or cyclic carbonate; and

_____ each R⁵ independently is a group R³ or the reaction product of R³ with amine-specific reagent L.

10. (Currently Amended) ~~Polyamine~~ A polyamine derivative obtainable ~~obtained~~ by ~~a~~ the process according to claim 1.

11-12. (Canceled).

13. (Previously Presented) A printing ink formulation, comprising the polyamine derivative of claim 9.

14. (Previously Presented) A coating composition, comprising the polyamine derivative of claim 9.

15. (Previously Presented) A pigment dispersant, comprising the polyamine derivative of claim 9.

16. (Previously Presented) A printing ink formulation, comprising the polyamine derivative of claim 10.

17. (Previously Presented) A coating composition, comprising the polyamine derivative of claim 10.

18. (Previously Presented) A pigment dispersant, comprising the polyamine derivative of claim 10.

19. (New) A process for preparing a polyamine derivative, comprising:

(a) reacting at least one polyamine with at least one member selected from the group consisting of lactones, hydroxyacids, cyclic carbonates, and mixtures thereof, to form a polyamine derived compound,

wherein:

each of the polyamines comprises at least one -NH₂ functional group and at least one second amine functional group, the second amine functional group having a lower lactone reactivity than the -NH₂ functional group, and

the polyamine-derived compound comprises at least one of an amide and urethane group; and

(b) reacting the polyamine-derived compound with at least one amine-specific reagent, and optionally with an amine modifier, to form an intermediate, the amine-specific reagent having at least two amine-specific functional groups, and the amine modifier being given by formula III:



wherein:

x is an integer of 0, 1 or 2,

y is an integer of 0, 1 or 2,

z is an integer of 0 or 1,

x+y is 1 or 2,

x+y+z is 1 or 2,

Y represents an anchoring moiety with affinity for a pigment surface or substrate,

Y'' represents a stabilising moiety with affinity for a matrix, and

Y' represents a further group that is neither an anchoring moiety or a stabilising moiety;

wherein the intermediate comprises at least two polyamine residues linked by the amine-specific reagent, or if an amine modifier is used, the intermediate comprises at least one polyamine residue and at least one amine modifier residue linked by the amine-specific reagent, and

the intermediate having an anchoring moiety with affinity for a pigment surface or substrate, and a stabilising moiety with affinity for a matrix.